

What Is Claimed Is:

1. An apparatus for sensing objects and for outputting the ascertained object data, the apparatus featuring at least one object-detection device as well as a connector element to a data bus,
wherein the apparatus for sensing objects sends, via the connector element to a data bus, a fixed, predetermined number of data packets provided for transmitting measurement data up to a maximum possible number of detected objects.
2. The apparatus for sensing objects and for outputting the ascertained object data, particularly as recited in Claim 1,
wherein the apparatus for sensing objects inserts the current measurement data of the detected objects into a fixed, predetermined number of data packets, the object which was selected as the most relevant object by a device for further processing being marked, and the apparatus outputting the data packets to a data bus via the connector element to the data bus.
3. The apparatus as recited in Claim 1 or 2,
wherein the measurement data of the object selected by a device for further processing as the most relevant object are marked using a flag or by inputting the object data in a predetermined data packet.
4. The apparatus as recited in one of the preceding Claims 1 through 3,
wherein the object-detection system is a transmitting and receiving device for radar radiation and/or a transmitting and receiving device for lidar radiation and/or a receiving device for an image processing system.
5. An apparatus for transmitting data between a first device, which features at least one object-detection device and a connector element to a data bus, and a second device, which features at least one connector element to a data bus and a device for the further processing of the measurement data, which were ascertained by the object-detection device,
wherein the data are transmitted via a fixed, predetermined number of data packets provided for transmitting measurement data up to a maximum possible number of detected objects.

6. The apparatus as recited in one of the preceding claims, wherein the data bus is a CAN bus.

7. The apparatus as recited in one of the preceding claims, wherein the apparatus is used in a motor vehicle, particularly in a device for adaptive cruise control along the lines of a constant-distance control and a constant-speed control.

8. A method for transmitting measurement data between an object-detection device and an evaluation device, wherein the evaluation device sends one or more data packets to the object-detection device; the object-detection device inserts the current measurement data of the detected object into a fixed, predetermined number of data packets; the objects selected by a device for further processing as the most relevant objects being marked and entered preferentially into the fixed, predetermined number of data packets; and the apparatus outputting the data packet to a data bus via the connector element to the data bus.

9. The method as recited in Claim 8, wherein the data packets are provided for measurement data of a constant, predetermined number of detected objects.

10. The method as recited in Claim 8 or 9, wherein the measurement data of the object selected by a device for further processing as the most relevant object are marked using a flag and/or by inputting the object data at a specified position of the data packet.

11. The method as recited in one of Claims 8 through 10, wherein the object-detection device inserts information into the data packet as to whether the evaluation device already identified the particular object as relevant in the preceding data exchange cycle.

12. The method as recited in one of the preceding Claims 8 through 11,

wherein the data packets, which the device having at least one device for further processing sends to the device having at least one object-detection system, contain the object identifiers, which the device for further processing detected as relevant objects.

13. The method as recited in one of the preceding Claims 8 through 12, wherein the device for the further processing of the measurement data specifies for the object-detection device two distance limits and/or two velocity limits, and the object-detection device only takes into account the detected objects whose distance to the object-detection device lies within the specified distance limits and/or whose relative velocity in relation to the object-detection system lies within the specified velocity limits.

14. The method as recited in one of the preceding Claims 8 through 13, wherein the data packets, which are designed for a constant, predetermined number of objects, provides measurement data for 8, 16 or 32 objects.